# DONATION OF AMBULANCE TO TAMIL NADU HEALTH SYSTEM PROJECT

### **Prepared For**



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## **EXECUTIVE SUMMARY**

Karur Vysya Bank donated ALS (Advanced Life Support) ambulances and BLS (Basic Life Support) ambulances to the government at the cost of 1.77 crores in FY 21-22. They have donated 10 Ambulances, of which 4 are used in the plains and 6 in the hilly regions.

Data is collected for the qualitative study by conducting in-depth one-to-one interviews with the stakeholders (Ambulance drivers and EMTs)to gain a better understanding of their feedback and suggestions.

Significant results of the impact study include the fact that the maintenance staff keeps ambulances in good working order and that EMTs and ambulance drivers do not encounter any technical difficulties on the road. The ambulances operate efficiently, are quick to achieve high speeds, use little fuel, and are comfortable to ride in for extended periods. The ambulances are extremely advanced and outfitted with cutting-edge technology. Due to their two-wheel-drive design, BLS ambulances have less power in areas with hills. Additionally, as the BLS Ambulances have smaller cabins, it is challenging to accommodate patient carers.

From July 2021 to February 2023, the Karur Vysya Bank's ALS and BLS ambulances assisted almost 22,000 patients in PHCs throughout Tamil Nadu. There have been no breakdowns or issues with any of the ambulances that have been distributed. The ambulances and the life-saving equipment are constantly maintained by the fleet coordinators and maintenance staff. Because they have two wheels instead of four, the BLS ambulances used in hilly terrain cannot operate as well as the ALS ambulances, which have four wheels. Due to their smaller cabins, BLS ambulances cannot carry additional patient carers.



# CHAPTER 1: INTRODUCTION

Karur Vysya Bank donated ALS (Advanced Life Support) ambulances and BLS (Basic Life Support) ambulances to the government at the cost of 1.77 crores in FY 21-22. They have donated 10 ambulances in total, of which 4 are used in the plains and 6 in the hilly regions.

The donated ambulances were deployed at the following locations:

- Erode-Bargurr PHC
- Erode-Hasanur Forest Quarters
- Namakkal-Powerkadu PHC
- Nilgiri- Iyenkolli PHC
- Nilgiri- Srimadurai PHC
- Nilgiri- Solurmattam PHC
- Nilgiri Kolakambai PHC
- Nilgiri- Kallatti PHC
- Karur- Aravakuruchi GH
- Karur- Karur GH

The Ambulance driver gets a call from the patient via the 108 call centre, based on the patient's location from the ambulance, the nearest ambulance with all the facilities rushes to the patient's spot. From there the Ambulance takes the patients to the nearest Government Hospital. The Ambulances are well maintained by the Fleet coordinator and emergency management executives. The patients register, Driver duty registers and fuel registers are maintained by the ambulance drivers themselves. All the ambulance drivers are working on a shift basis only. The district manager oversees these project ambulances. In this study 5 PHCs were covered they were:-

- Nilgiris- Solurmattam PHC
- Nilgiris Kolakambai PHC
- Nilgiris- SriMadurai PHC
- Karur- Aravakuruchi GH
- Karur- Karur GH

The following were the reasons for choosing these 5 PHCs in particular. The first 3 PHCs are in hilly regions and the last 2 PHCs are in plains. ALS ambulances are donated to Karur districts and BLS to Nilgiris districts.

## **Focus Areas of the Project**



Interaction with the Ambulance drivers/staff



Inspection of Ambulance condition



# **CHAPTER 2: RESEARCH METHODOLOGY**

Research can be stated as a logical and systematic search for new and useful information on a particular subject matter. Social science research refers to the systematic activity of gaining new understanding by following scientific principles and methods to minimize bias and subjectivity. It is opposed to writing something based on assumptions or speculations. Though information on certain facts can also be gained through common sense and based on general observations and hearsay, these facts will not be considered valid until they have been obtained in a methodical manner, which can stand the test of time. The defining characteristics of scientific research are objectivity, ethical neutrality, reliability, testability and transparency. Identification of the research problem provides the starting point of research, which is then defined and redefined through a proper review of the literature on the problem or deliberations with researchers and other subject experts. Each research problem has a multitude of perspectives and dimensions; research cannot cover all of these in a single study. Thus, we need to delimit the research problem into a 'measurable problem and formulate objectives, make decisions on the research design, sample design, type of research instruments for collecting the data and how these data can be edited, coded, classified, tabulated and interpreted so that findings and conclusions can be reached. Every research needs to have a proper methodology to foresee the problems that could arise during research and steer through the research process in a proper direction without losing focus.



#### **Use of Mixed Methodology for Maximum Insights**

The research problem consisted of understanding the extent of impact created by Karur Vysya Bank, which supported the local communities, by donating ALS and BLS Ambulances to the government. To gain maximal insights, both quantitative and qualitative techniques are used.

## **Application of Qualitative Techniques**

It is only qualitative research that can unravel the rich and hidden information that may not be evident. The qualitative approach is distinguished by deeper probing and flexibility, and it can yield massive amounts of data that were not anticipated when the research was initiated. Quantitative techniques are used for better accuracy, to ensure anonymity, and to cover a larger sample population. Qualitative techniques of interviews with key stakeholders and interviews with community people were adopted for a better understanding of the problem alongside quantitative research.

## **Ensuring Triangulation**

Triangulation is needed to increase the credibility and validity of the research findings. It is also a measure taken to ensure the trustworthiness of the research process. The findings of the quantitative research have been verified with the insights from qualitative research, and the reports have also been structured to reflect these points.

#### **Research Design**

• Name of the project : Donation of Ambulance to Tamil Nadu Health

**System Project** 

Project partner : Karur Vysya Bank

Research Design used : Descriptive Research Design

• Sampling Technique : Random Sampling

Sample size : 5 Ambulance Drivers and EMTs

Qualitative methods used : In-depth interview

### **Key Stakeholders**





Ambulance drivers

Ambulance paramedic staff

### **Study Tools**

#### **Tools used during the study**

SoulAce has developed a mobile application SoulAce has developed a mobile application platform for data collection that the field team used to undertake the study. The application has real-time data entry and data upload with GPS location details with a questionnaire for interaction with the project beneficiaries. The application also has a provision to take pictures of each respondent.



#### Primary data was collected using two types of questionnaires.

## Questionnaire for Primary Beneficiaries:

Structured questionnaires were developed reviewing the project details of each of the focus areas, and indicators were pre-defined before conducting the surveys.

## Questionnaire for Secondary Beneficiaries & Stakeholders:

Semi-structured questionnaires were developed for each type of sample of this group. Stakeholders were identified across the focus areas. One on One discussion were held with beneficiaries to prepare the case studies.



### **Ensuring Commitment to Research Ethics**

## **An**onymity

Anonymity refers to not revealing the identity of the respondents. The study strictly sticks to not revealing the identity of respondents unless the same is warranted for the illustration of success stories or case studies. After the research was completed, the study did not reveal which individual respondents answered which question in what manner. The results were revealed only as an aggregate, so no one would be able to single out the identity of a particular respondent. This was required to not break the trust of the respondents.

#### Confidentiality

Research subjects participate in the process only based on the trust maintained by confidentiality. Hence, the research shall not reveal any data regarding the respondents for purposes other than the research study.

## Non-Maleficence

Research shall not lead to any harm to the research subjects. This study ensures that the respondents are not harmed in any way.

#### **Be**neficence

Any research study should lead to some benefits for the respondent. This research study also ensures that individuals, groups, and communities benefit and enhance their well-being.

#### **Ju**stice

Justice refers to being fair to all. This research study ensures equal treatment of all its research subjects. It harbors no biases or prejudices towards any group based on social stereotypes or stigma associated with being a member of a certain group or class.



# CHAPTER 3: TESTIMONIALS FROM THE STAKEHOLDERS



Manikkam- Ambulance Driver, Karur - Aravakurichi GH
(Testimonials from Stakeholders)

I have been an ambulance driver for ten years. I drive full-time, doing 12-hour shifts. Each ambulance includes three drivers and three medical technicians. I make a monthly salary of 24,000 rupees. The pay is based on the driver's level of experience. The 108-call center informs us of the patient's location. We then rush to the area. We exclusively transport people to public hospitals. I'm responsible for keeping track of the patient register, driver duty register, and fuel register. These project ambulances are managed by the district manager. The emergency management executive and the fleet coordinator are in charge of the ambulance's legal proceedings, including the payment of the driver's wages and fuel expenses. I'm quite happy with the ALS ambulance scheme. It is fuel-efficient, runs smoothly, can reach high speeds quickly, and is also comfortable for long-distance rides. I suggest providing "KVB STICKER" as a weatherproof sticker. We would also require some extra ALS Ambulances in the Karur district.



S.Vasantha Kumar-Ambulance Driver, Karur GH (Testimonials from Stakeholders)

I've been driving ambulances for 8 years, with 1 year spent filling in. I work a 12-hour shift as a full-time driver. I make 22,000 rupees a month. I used to take all the patients in this ALS Ambulance during the epidemic period. During the pandemic, all drivers and paramedical crew aboard this ambulance wore PPE kits, headgear, masks, and gloves. We exclusively transport people to public hospitals. I'm responsible for keeping track of the patient register, driver duty register, and fuel register. These project ambulances are managed by the district manager. The emergency management executive and the fleet coordinator are in charge of the ambulance's legal proceedings, including the payment of the driver's wages and fuel expenses. I adore traveling in our brand-new ALS ambulance. It is extremely complex and equipped with cutting-edge technology. My own opinion is that the Karur district needs more ALS ambulances in the future to serve more people who are in need.



Ashwin Kumar- Emergency Medical Technician, Solurmattam-PHC (Testimonials from Stakeholders)

I have 2.5 years of experience as an emergency medical technician. I have been a part of the 24hour shift as a full-time employee, both during the COVID period and later. Each month, I make Rs. 16,000 in income. Each ambulance has three pilots and three EMTs, with one pilot and one EMT filling in as required. We receive phone calls from the 108-call center, which provides us with the patient's precise location. We transport patients to either a private or district hospital as requested by the patient. For reasons of safety, we exclusively treat general patients in our ambulance. All ambulance personnel were fully outfitted with PPE kits, headgear, and gloves during the epidemic. Fortunately, nobody contracted COVID. We used to provide care for 15-20 individuals per day throughout the pandemic. Our current daily intake is four general patients and four delivery cases. We regularly keep up with the patient, driver, and fuel registers. The registers are handled by both the pilot and the EMT. With reference to this project, we report to the fleet coordinator. It is the fleet coordinator who oversees all the legal procedures. We experience no problems because the personnel keeps the ambulances in good shape. Also, the BLS (Basic life support) ambulance is a two-wheel-drive vehicle that is compact in size. As a result, there is not enough power to drive up hills, and there is not enough room for patient carers.





# Ranjith Kumar-Emergency Medical Technician, Kolakombai-PHC (Testimonials from Stakeholders)

I have seven years of experience as an emergency medical technician. As a full-time employee, I put in a 12-hour shift. I make a monthly salary of 24,000 rupees. Each ambulance has three pilots and three EMTs, with one pilot and one EMT filling in as required We learn the patient's location from the 108-call center. All patients are taken to the district hospital. For reasons of safety, we exclusively treat general patients in our ambulance. All ambulance staff members were fully outfitted with PPE kits, headgear, and gloves during the epidemic. We used to provide care for 15-20 individuals per day throughout the pandemic. Currently, we accept 3 birth cases and 5 ordinary patients on a daily basis. We regularly keep up with the patient, driver, and fuel registers. The registers are handled by both the pilot and the EMT. With reference to this project, we report to the fleet coordinator. Pick-up and delivery services are only provided to delivery patients. It is the fleet coordinator who oversees all legal procedures. We experience no problems because the personnel keep the ambulance in good condition. The Karur Vysya Bank sticker is not weatherproof, because of which it fades off within a short period of time. This compact, two-wheel-drive ambulance is a BLS (basic life support) vehicle. As a result, there is not enough power to drive up hills, and there is not enough room for patient carers.



Sadeesh-Emergency Medical Technician, Srimadurai-PHC (Testimonials from Stakeholders)

I have been an emergency medical technician for ten years. As a full-time employee, I work a 24-hour shift. I bring in Rs. 25,500 each month. For this ambulance, we have 4 pilots and 4 EMTs, of which 2 pilots and 2 EMTs are standbys. We receive a call from the 108-call center, with details of the patient's precise location. We only transport people to neighborhood hospitals. All patients are accommodated in this ambulance. All ambulance staff members were fully outfitted with PPE kits, headgear and gloves during the epidemic. The epidemic had impacted us negatively. We used to care for 4-5 patients each day throughout the epidemic time. Currently, we accept 2 birth cases and 5 ordinary patients on a daily basis. We regularly keep up with the patient, driver and fuel registers. The registers are handled by both the pilot and the EMT. With reference to this project, we report to the fleet coordinator. Pick-up and delivery services are only provided to delivery patients. It is the the fleet coordinator who is in charge of all legal procedures. We experience no problems because the personnel keep the ambulance in good condition. This compact, two-wheel-drive ambulance is a BLS (basic life support) vehicle. As a result, there is not enough power to drive up hills, and there is not enough room for patient carers.



# IMPACT OF THE CSR INTERVENTION

Karur Vysya Bank donated 4 full-size ALS Ambulances that are used in the plains and 6 BLS Ambulances that are used in the hilly regions to the Tamil Nadu Government. These Ambulances played a very huge role during the COVID pandemic in Tamil Nadu. A regular ambulance has only basic amenities like a stretcher, wheelchair, stand for holding drips bottle, and a basic oxygen tank. The ambulances that have been donated have ventilators, which force oxygen from the oxygen tank directly to the patient's lungs via their nostrils and mouth, multi-para monitors to check all the vitals of the patient, and defibrillators that give electric pulses to prevent the heart from stopping beating. Foldable wheelchairs, scoop stretchers, spine boards, suction apparatuses, head immobilizers, and portable oxygen cylinders are the other equipment that these ambulances possess.

All this equipment plays a crucial role in saving patients from very critical situations and providing life support till they reach the hospital. The ambulance has trained paramedical staff, who has a thorough knowledge of using this equipment to save lives.



### OECD FRAMEWORK



#### **RELEVANCE**



The ambulance support to PHCs by Karur Vysya Bank has addressed the real and felt needs of the community by saving patients' lives with the help of advanced equipment. The project has helped in improving the well-being of the people. .. Hence, the project is highly relevant to the needs of the project communities.

#### **COHERENCE**



The ambulance support to PHCs by Karur Vysya Bank has greatly aided in realizing the following SDGs.

Goal 3: Good health and well-being. Goal 10: Reduced inequalities. Hence, the program is coherent with international standards and national policies and programs.



#### **EFFECTIVENESS**



The ambulance support program has fulfilled its intended objective by improving the lives of the project communities by offering them timely help in critical situations. Hence, the project can be stated to be highly effective in nature.

#### **EFFICIENCY**



The social and economic impact of the project is multifold. The project is highly efficient, as several lives were saved due to it during the pandemic period.

#### **IMPACT**



The ambulances have created a huge impact by providing crucial life support that a patient needs while he/she fights for life. The ventilator and the defibrillator prevent the patient from falling below the critical line.

#### **SUSTAINABILITY**



The ambulance support was appreciated by all the PHCs that were visited during the field study. The drivers and the paramedical staff use the ambulances properly. The ambulances are being well taken care of by the fleet coordinator and the emergency management executive of the respective districts. The PHCs are demanding extra ALS ambulances for their districts. Hence, the program is highly sustainable in nature.

Index: 5 Points - Very High; 4 Points - High; 3 Points - Moderate; 2 Points - Low; 1 Point - Very Low

# **MAJOR FINDINGS**

- The ambulances are well maintained by the maintenance team, and the ambulance drivers and the EMTs don't face any technical problems while they are on the move.
- The ambulances run smoothly, can reach high speeds within a short duration, are fuelefficient, and are also comfortable to ride long distances in.
- The ambulances are very sophisticated and have all the modern, new-age equipment.
- The BLS ambulances are two-wheel drives and produce less power in hilly regions.
- The BLS ambulances have less cabin space, so accommodating helpers for patients are difficult.





## **RECOMMENDATIONS**

The most common recommendations offered by the PHCs are as follows:-

- The BLS ambulances are lacking in power, and they are not able to travel uphill more efficiently with all the members in the ambulance.
- The space inside the BLS ambulance is less; hence, accommodating patients' family members is a challenge.
- The ALS ambulances are liked very much by the Karur district PHCs, and they are demanding additional ALS ambulance support for their district.
- The Nilgiris Ooty PHCs are also demanding an ALS ambulance due to its 4-wheel drive capacity and large carrying space for patients and equipment.
- The Karur Vysya Bank stickers on either side of the ambulances are wearing off due to high
  heat and rainfall. The staff are requesting weatherproof KVB stickers for the ambulances.
  Also the PHCs do not have an additional set of KVB stickers with them, so they are sticking
  government stickers instead.

# CONCLUSION

The ALS and the BLS ambulances provided by the Karur Vysya Bank to the PHCs across Tamil Nadu served around 22,000 patients from July 2021 till February 2023. All the ambulances issued run smoothly without any breakdowns or problems. The fleet coordinators and the maintenance team regularly maintain the ambulances and the life-saving equipment. The BLS ambulances given to the hill areas are 2-wheel drive and hence couldn't perform well like the ALS ambulances, which are 4-wheel drive vehicles. The BLS ambulances have less cabin space, so they cannot t accommodate extra helpers for patients.